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USE OF TOTALS VS TCLP AT THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

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LETTER

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Mr. James Saric, Project Director
U. S. Environmental Protection Agency
Region V, 5HR-12
230 Dearborn Street
Chicago, Illinois 60604

Dear Mr. Saric:

USE OF TOTALS VS TCLP AT THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

This letter summarizes three general cases at the FEMP where total compositional "totals" analyses of wastes are being used in lieu of TCLP analyses to complete RCRA waste identification relative to the Toxicity Characteristic (TC). If you have any concerns regarding implementation of the approaches discussed below, please provide written comments. If no comments are received within 30 days of issuance of this letter, your concurrence will be assumed.

The first case involves use of totals analyses as knowledge of the waste (as provided under 40 CFR 262.11). When particular constituents or constituent regimes are not suspected in the waste under evaluation, but can not be ruled out by process knowledge, totals analyses are used to confirm that the constituents are not present in the waste at levels that could cause the waste to fail the TC. If analyses at the totals level do not exceed the regulatory limit then the waste can not possibly fail the TC. If on the other hand the totals analyses exceed the regulatory limit, then a TCLP test is required to determine if the constituents are leachable above regulatory levels. Compliance with the TC rule using this approach is specifically provided for in the TCLP method: "If a total analysis of the waste demonstrates that individual analytes are not present in the waste, or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the TCLP need not be run." (SW-846 Method 1311, item 1.2). This approach reduces demand on lab capacity for TCLP extractions, allows for the analysis of listed solvents along with TC volatile organics, and generally yields time and cost savings.

The second case involves the analysis of oils and extremely oily wastes. The TCLP has been demonstrated not to perform well on oily wastes and to yield results that vary widely in terms of reproducibility. The U. S. EPA is currently working on development of an oily waste characteristic to alleviate some of these problems. In the interim, the FEMP has chosen to use totals analyses for these wastes to make compliance decisions regarding the TC. This conservative approach assures that oily wastes that should be identified as hazardous waste are identified as such.

The last case involves use of totals analyses in lieu of TCLP analyses for liquid waste. When there are less than 0.5% filterable solids, the TCLP simplifies to a total analysis. However, price schedules from contract labs do not reflect the reduced effort associated with TCLP analyses that do not require TCLP extraction. Because totals are substantially less expensive than TCLP analyses, it benefits the FEMP in terms of cost to request totals analyses for liquid samples in order to make TC compliance decisions.

Each of these cases represents a conservative approach to compliance with RCRA waste identification pursuant to the TC. Each yields substantial benefits to the FEMP in terms of RCRA program implementation.

If you have any questions, please contact David Rast at FTS 774-6322.

Sincerely,

Jack R. Craig
Fernald Remedial Action
Project Director

FO:Rast

cc:

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